

Lavoro helped an EOR operation enhance data visibility, automate workflows and optimize injection well efficiency

Operator reduced the latency of data critical to optimizing their gas lift from 48 hours to near real-time

	A	B	C	D	E	F	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ			
1	INDIVIDUAL WELLS							FACILITY METERS											
2	A-11X	A-27X	A-53X	A-61X	A-80H	A-08X	Total	UNIT-AA	RECYCLE	UNIT-AB	RECYCLE	UNIT-AC	RECYCLE	Total	Purchased	Total	* Delta Variance	**% Var	
3	Skid	C	B	B	A	F	J	Injection	NA	NA	NA	NA	NA	NA	NA	Recycle+Purchase			
4		0	-287	0	0	-99	0	-2197		-15.32		-31		-27	-73.32	258.52	185.2	2382.2	132.79%
5	2020-10-12	0	1306	0	0	58	0	5798		13330.34		1454		6743	21527.34	6002.02	27529.36	21731.36	374.81%
6	2020-10-11	0	1593	0	0	157	0	7995		13345.66		1485		6770	21600.66	5743.5	27344.16	19349.16	242.02%
7	2020-10-10	0	4490	0	0	982	0	23837		14416.13		1413		6803	22632.13	3763.68	26395.81	2558.81	10.73%
8	2020-10-09	0	4486	0	0	1026	0	23266		14216.32		1502		6774	22492.32	3244.65	25736.97	2470.97	10.62%
9	2020-10-08	0	4267	0	0	972	0	23750		14720.86		1536		6810	23066.86	4429.44	27496.3	3746.3	15.77%
10	2020-10-07	0	4434	0	0	977	0	24792		14252.32		1687		6797	22736.32	4166.02	26902.34	2110.34	8.51%
11	2020-10-06	0	4500	0	0	948	0	25986		14737.33		1571		6827	23135.33	4587.79	27723.12	1737.12	6.68%
12	2020-10-05	207	4142	0	0	930	0	27183		15085.78		1679		6826	23590.78	5051.72	28642.5	1459.5	5.37%
13	2020-10-04	2097	0	0	0	1005	0	30366		15034.11		1810		6741	23585.11	7933.45	31518.56	1152.56	3.8%
14	2020-10-03	2252	0	0	0	961	0	29954		14878.32		1562		6761	23201.32	7990.87	31192.19	1238.19	4.13%
15	2020-10-02	2547	0	0	0	934	0	30544		15168.66		1755		6750	23673.66	8014.1	31687.76	1143.76	3.74%
16	2020-10-01	3219	0	0	0	1000	0	31079		15392.24		1670		6813	23875.24	7599.74	31474.98	395.98	1.27%
17	2020-09-30	2082	0	0	0	995	0	29335		13685.12		1738		6907	22330.12	8136.5	30466.62	1131.62	3.86%

An operator in the Permian Basin implemented Lavoro’s Foundation application bundle to quickly integrate with their existing equipment, cost-effectively track thousands of tags, and timely produce a custom well injection report that helps the operator optimize its production. As the company continues to embrace automation, it will use additional existing Lavoro capabilities to control the injection optimization in real-time.

The operator’s challenges

An independent oil and gas company with enhanced oil recovery (EOR) operations inside the Permian Basin was using a historian to track thousands of data streams. But as the team’s operations evolved and the historian got older, issues began to surface. The historian was several versions behind, and its hardware was beginning to have issues. More importantly, the historian lacked key capabilities that the team needed to enhance its operations—including a report used to optimize CO2 and water injection wells. Without this capability, the team had to manually extract the data, import it to Excel and wait for it to be processed.

What the operator tried first

After assessing the upgrade process, the company knew it would not solve their challenges. The upgrade itself was expensive, with a recurring license fee that provided little flexibility. And even with the pricey upgrade, the historian would not meet the team’s needs. At best, it would still take 48 hours for data to get from the field to the office—with many slow, manual processes in between. When the company decided to decommission its current solution, Lavoro was ready to help its team discover the power of a modern, cost-effective historian.

What Lavoro provided

Lavoro provided its Foundation application bundle that includes a modern, scalable, affordable historian solution. The Lavoro Foundation bundle makes it easy to integrate, collect, historize, contextualize, and analyze operational data—then share those insights in near-real-time from the edge to the enterprise. With Lavoro Foundation, the customer replaced its outdated, inefficient solution with a practical, scalable edge cloud platform. REFPROP density and volume calculations are now performed automatically in the field. Cloud-hosted dashboards allow the team to visualize all process variables in near-real-time, from any browser-enabled device. To eliminate manual processes and delays, the critical report the operator needed to optimize its CO2 and water injection wells is automatically produced.

What was achieved

By replacing its outdated historian with Lavoro Foundation, the operator achieved clear, immediate results. Its team can access field data from the office in near real-time and can receive notifications when conditions of interest are met.

The operator’s connected injection wells are now able to be optimized as frequently as desired to minimize cost and maximize production, with the capability to automate 100% of the optimization in real-time on the platform in the future. Key reporting is fully automated, with no manual steps required.

As the operator continues to use the Lavoro Foundation, it is finding new value-adds. Case in point: when storms interrupted site connectivity to the cloud, Lavoro Historian on the edge ensured that no data was lost. The moment connectivity came back, the data was available in the cloud.